



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
(Case No. 03-075-US)

In Re Application of:

Juan Saus

Serial No.: 10/772,656

Filed: February 5, 2004

For: Novel Goodpasture Antigen-Binding  
Isoforms and Protein Misfolded-Mediated  
Disorders

Group Art Unit: 1632

Examiner: To be assigned

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

TRANSMITTAL LETTER

Sir:

1. We are transmitting herewith the attached papers for the above-identified Patent Application:

- ☒ Transmittal Letter (1 sheet);
- ☒ Information Disclosure Statement (IDS) (6 sheets);
- ☒ IDS Form 1449 (4 sheets);
- ☒ Copy of International Search Report from Corresponding  
PCT Patent Application No. PCT/EP2004/001074 (4 sheets);
- ☒ Copy of 31 Cited References
- ☒ Return Postcard

2. With respect to fees:

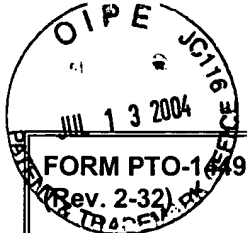
☒ No fee is required.

3. **GENERAL AUTHORIZATION TO CHARGE OR CREDIT FEES:** Please charge any additional fees or credit overpayment to Deposit Account No. **13-2490**. A duplicate copy of this sheet is enclosed.

4. **CERTIFICATE OF MAILING BY "EXPRESS MAIL" UNDER 37 CFR § 1.10:** The undersigned hereby certifies that this Transmittal Letter and the paper, as described in paragraph 1 hereinabove, are being deposited with the United States Postal Service with sufficient postage as "Express Mail Post Office to Addressee" in an envelope addressed to: Commissioner for Patents, Box New Application, P.O. Box 1450, Alexandria, VA 22313-1450, on this 13<sup>th</sup> day of **July, 2004**. Express Mail No. **EV334706100US**.

By: \_\_\_\_\_

David S. Harper  
Registration No. 42,636



<b>U.S. Department of Commerce Patent and Trademark Office</b>  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (Use several sheets if necessary)	<b>Atty. Docket No.</b>  03-075-US	<b>Serial No.</b>  10/772,656
	<b>Applicant:</b>  Juan Saus	
	<b>Filing Date:</b>  February 5, 2004	<b>Group:</b>  1632

**U.S. PATENT DOCUMENTS**

Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate
	1.	6,579,969	6/17/03	Juan Saus			2/24/00
	2.	6,506,559	1/14/03	Andrew Fire, et al.			12/18/98

**FOREIGN PATENT DOCUMENTS**

		Document Number	Date	Country	Class	Subclass	Translation	
							Yes	No
	3.	WO 00/50607	8/31/00	PCT				
	4.	WO 01/54733	8/2/01	PCT				
	5.	WO 02/061430	8/8/02	PCT				
	6.	WO 03/048193	6/12/03	PCT				
	7.	EP 1 347 046	9/24/03	Europe				

**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc).**

	8.	Tatusova, et al., (1999), FEMS Microbiol. Lett. "BLAST 2 sequences, a new tool form comparing protein and nucleotide sequences", Vol: 174, pp. 247-250.
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<b>EXAMINER</b>	<b>DATE CONSIDERED</b>
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EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication.

<b>FORM PTO-1449</b> <b>(Rev. 2-32)</b>	<b>U.S. Department of Commerce</b> <b>Patent and Trademark Office</b>	<b>Atty. Docket No.</b> 03-075-US	<b>Serial No.</b> 10/772,656
<b>INFORMATION DISCLOSURE</b> <b>STATEMENT BY APPLICANT</b>  (Use several sheets if necessary)			<b>Applicant:</b> Juan Saus
		<b>Filing Date:</b> February 5, 2004	<b>Group:</b> 1632

	9.	Jones, et al., (1986), Nature, "Replacing the complementarity-determining regions in a human antibody with those from a mouse", Vol: 321, pp. 522-525.
	10.	Morrison, et al., (1984), Proc. Natl. Acad. Sci., U.S.A., "Chimeric human antibody molecules: Mouse antigen-binding domains with human constant region domains", Vol: 81, pp. 6851-6855.
	11.	Morrison and Oi, (1988), Adv. Immunol., "Genetically engineered antibody molecules", Vol: 44, pp. 65-92.
	12.	Verhoeyen, et al., (1988), Science, "Reshaping human antibodies: grafting an antilysozyme activity", Vol: 239, pp. 1534-1536.
	13.	Padlan, (1991), Molec. Immun., "A possible procedure for reducing the immunogenicity of antibody variable domains while preserving their ligand-binding properties", Vol: 28, pp. 489-498.
	14.	Padlan, (1994), Molec. Immunol., "Anatomy of the antibody molecule", Vol: 31(3), pp. 169-217.
	15.	Kettleborough, C.A., et al., (1991), Protein Eng., "humanization of a mouse monoclonal antibody by CDR-grafting: the importance of framework residues on loop conformation", Vol: 4(7), pp. 773-783.
	16.	Pham, C.T., & T.J. Ley, (1999), Proc. Natl Acad Sci USA, "Dipeptidyl peptidase I is required for the processing and activation of granzymes A and B in vivo", Vol: 96(15), pp. 8627-8632.
	17.	Chapman, H.A., (1998), Curr Opin Immunol, "Endosomal proteolysis and MHC class II function", Vol: 10(1), pp. 93-102.

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	18.	Demotz, S., et al., (1989), J. Immunol, "Processing of tetanus toxin by human antigen-presenting cells", Vol: 143(12), pp. 3881-3886.
	19.	Turk, V., et al., (2001), EMBO J, "Lysosomal cysteine proteases: facts and opportunities", Vol: 20(17), pp. 4629-4633.
	20.	Prusiner, S.B., (1998), Proc Natl Acad Sci USA, "Prions", Vol: 95(23), pp. 13363-13383.
	21.	Raya, A., et al., (1999), J. Biol. Chem., "Characterization of a novel type of serine/threonin kinase that specifically phosphorylates the human goodpasture antigen", Vol: 274, pp. 12642-12649.
	22.	Aniento, F., et al., (1993), J. Biol. Chem., "Uptake and degradation of glyceraldehydes-3-phosphate dehydrogenase by rat liver lysosomes", Vol: 268, pp. 10463-10470
	23.	Raya, A., et al., (2000), J. Biol. Chem., "Goodpasture antigen-binding protein, the kinase that phosphorylates the goodpasture antigen, is an alternatively spliced variant implicated in autoimmune pathogenesis", Vol: 275, pp. 40392-40399.
	24.	Miñana MD, et al., (1998), Neuropharmacology, "Nicotine prevents glutamate-induced proteolysis of the microtubule-associated protein MAP-2 and glutamate neurotoxicity in primary cultures of cerebellar neurons", Vol: 37, pp. 847-857.
	25.	Supattapone, S., et al., (2001), J. Virol, "Branched polyamines cure prion-infected neuroblastoma cells", Vol: 75, pp. 3453-3461.
	26.	Prusiner, S.B, (2001), N England J Med, "Shattuck Lecture-Neurodegenerative Diseases and Prions", Vol: 344, pp. 1516-1526.

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**FORM PTO-1449**  
(Rev. 2-32)

**U.S. Department of Commerce**  
**Patent and Trademark Office**

**Atty. Docket No.**

03-075-US

**Serial No.**

10/772,656

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use several sheets if necessary)

**Applicant:**

Juan Saus

**Filing Date:**

February 5, 2004

**Group:**

1632

27.	Kaneko, K., et al., (1997), Proc. Natl. Acad. Sci. USA, "Evidence for protein X binding to a discontinuous epitope on the cellular prion protein during scrapie prion propagation", Vol: 94, pp. 10069-10074.
28.	Ma, J. and Lindquist, (2002), Science, "Conversion of PrP to a self-perpetuating PrP <sup>sc</sup> -like conformation in the cytosol", Vol: 298, pp. 1785-1788.
29.	Nixon, et al., (2000), Neurochem Res, "The endosomal-lysosomal system of neurons in alzheimer's disease pathogenesis: a review", Vol: 25, pp. 1161-1172.
30.	Andrea, M.R., et al., (2001), Histopathology, "Evidence that neurons accumulating amyloid can undergo lysis to form amyloid plaques in alzheimer's disease", Vol: 38, pp. 120-134.
31.	Eichberg, J., & Iyer, (1996), Neurochem Res, "Phosphorylation of myelin proteins: recent advances", Vol: 21, pp. 527-535.

EXAMINER

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**Annex to Form PCT/ISA/206**  
**COMMUNICATION RELATING TO THE RESULTS**  
**OF THE PARTIAL INTERNATIONAL SEARCH**

International Application No  
**PCT/EP2004/001074**

1. The present communication is an Annex to the invitation to pay additional fees (Form PCT/ISA/206). It shows the results of the international search established on the parts of the international application which relate to the invention first mentioned in claims Nos.:
- see 'Invitation to pay additional fees'
2. This communication is not the international search report which will be established according to Article 18 and Rule 43.
3. If the applicant does not pay any additional search fees, the information appearing in this communication will be considered as the result of the international search and will be included as such in the international search report.
4. If the applicant pays additional fees, the international search report will contain both the information appearing in this communication and the results of the international search on other parts of the international application for which such fees will have been paid.

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 01/54733 A (HUMAN GENOME SCIENCES INC ; ROSEN CRAIG A (US); BARASH STEVEN C (US) 2 August 2001 (2001-08-02) the whole document	1,2, 10-12
X	-& DATABASE EMBL 'Online! Novel signal transduction pathway protein, retrieved from EBI Database accession no. AAU17516 XP002282464 abstract	1,2,10
X	WO 00/50607 A (SAUS JUAN) 31 August 2000 (2000-08-31) page 25, line 24 -page 30, line 11; figures 1,3	12,17-23
P,X	EP 1 347 046 A (RES ASS FOR BIOTECHNOLOGY) 24 September 2003 (2003-09-24) the whole document	1-4, 10-12
P,X	-& DATABASE EMBL 'Online! retrieved from EBI Database accession no. AX836857 XP002282465 abstract	1-4,10
	-/-	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

\* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- \*&\* document member of the same patent family

**Annex to Form PCT/ISA/206  
COMMUNICATION RELATING TO THE RESULTS  
OF THE PARTIAL INTERNATIONAL SEARCH**

International Application No  
**PCT/EP2004/001074**

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>RAYA ANGEL ET AL: "Characterization of a novel type of serine/threonine kinase that specifically phosphorylates the human goodpasture antigen" JOURNAL OF BIOLOGICAL CHEMISTRY, THE AMERICAN SOCIETY OF BIOLOGICAL CHEMISTS, INC.,, US, vol. 274, no. 18, 30 April 1999 (1999-04-30), pages 12642-12649, XP002145905 ISSN: 0021-9258 figure 7</p>	12
X	<p>RAYA A ET AL: "Goodpasture antigen-binding protein, the kinase that phosphorylates the Goodpasture antigen, is an alternatively spliced variant implicated in autoimmune pathogenesis" JOURNAL OF BIOLOGICAL CHEMISTRY, AMERICAN SOCIETY OF BIOLOGICAL CHEMISTS, BALTIMORE, MD, US, vol. 275, no. 51, 22 December 2000 (2000-12-22), pages 40392-40399, XP002240530 ISSN: 0021-9258 figure 6</p>	12

# Patent Family Annex

Information on patent family members

International Application No

PCT/EP2004/001074

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 0154733	A	02-08-2001	AU 2950801 A	07-08-2001
			AU 3095801 A	07-08-2001
			AU 3645901 A	07-08-2001
			AU 3646001 A	07-08-2001
			AU 3646101 A	07-08-2001
			AU 3646201 A	07-08-2001
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			AU 3314000 A	14-09-2000
			CA 2361987 A1	31-08-2000
			EP 1144650 A2	17-10-2001
			WO 0050607 A2	31-08-2000
			JP 2003525023 T	26-08-2003
			US 6579969 B1	17-06-2003



**Patent Family Annex**  
Information on patent family members

International Application No

PCT/EP2004/001074

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 1347046	A	24-09-2003	EP 1347046 A1	24-09-2003
			JP 2004008216 A	15-01-2004
			US 2004005560 A1	08-01-2004
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7-14-04

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**PATENT**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
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**Juan Saus**

**Serial No.: 10/772,656**

**Filed: February 5, 2004**

**For: Novel Goodpasture Antigen-Binding  
Isoforms and Protein Misfolded-Mediated  
Disorders**

**Group Art Unit: 1632**

**Examiner: To be assigned**

**INFORMATION DISCLOSURE STATEMENT**

**Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450**

Dear Sir:

Pursuant to 37 C.F.R. Section 1.97 - 1.99, the Applicant wishes to make the following references of record in the above-identified application. This Information Disclosure Statement is in compliance with the continuing duty of candor as set forth in 37 C.F.R. Section 1.56. Copies of the references cited below are enclosed. These references are also listed on the enclosed PTO Form 1449.

In the judgment of the undersigned, portions of the listed references may be material to the Examiner's consideration of the presently pending claims. However, the references have not been reviewed in sufficient detail to make any other representation and, in particular, no representation is intended as to the relative relevance between references, whether cited in this or prior statements. This statement is not a representation that the listed references have effective dates early enough to be "prior art" within the meaning of 35 U.S.C. Section 102 or Section 103.

**McDonnell, Boehnen, Hulbert & Berghoff LLP  
300 S. Wacker Drive, Suite 3100  
Chicago, IL 60606  
312-913-0001**

This Information Disclosure Statement is being filed:

- ☒ within three months of the filing date of a national application; within three months of the date of entry into the national stage as set forth in 37 C.F.R. § 1.491 in an international application; or before the mailing date of a first Office Action on the merits. 37 C.F.R. § 1.97 (b)
- ☐ **after** three months of the filing date of a national application, or the date of entry into the national stage as set forth in 37 C.F.R. § 1.491 in an international application; or **after** the mailing date of a first Office Action on the merits, but **before** the mailing date of a Final Action under 37 C.F.R. § 1.113 or a Notice of Allowance under 37 C.F.R. § 1.311 (whichever occurs first), and includes (37 C.F.R. § 1.97 (c):
- ☐ the Certification under 37 C.F.R. § 1.97(e) (see "Certification" below)

**OR**

- ☐ the fee of \$240 set forth in 37 C.F.R. § 1.17(p) (see "Fees" below).
- ☐ **after** a Final Action under 37 C.F.R. § 1.113 or a Notice of Allowance under 37 C.F.R. § 1.311 (whichever occurs first), but before, or simultaneously with, the payment of the issue fee, and includes the Certification under 37 C.F.R. § 1.97(e) (see "Certification" below), and the Petition Fee set forth in 37 C.F.R. § 1.17(i) (see "Fees" and "Method of Payment of Fees" below). Applicants hereby petitions for consideration of the Information Disclosure Statement submitted herewith and the accompanying references in examination of the subject patent application.

#### CERTIFICATION

- ☐ The **undersigned** hereby certifies that each item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign patent application not more than three months prior to the filing of the Information Disclosure Statement.
- ☐ The **undersigned** hereby certifies that no item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign patent application or, to the knowledge of the person signing the certification after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of the Information Disclosure Statement.

McDonnell, Boehnen, Hulbert & Berghoff LLP  
300 S. Wacker Drive, Suite 3100  
Chicago, IL 60606  
312-913-0001

FEES

- ☒ **No fee** is owed by the applicant(s).  
☐ The **IDS Fee of \$240.00** under 37 C.F.R. § 1.17(p) is enclosed herewith.  
☐ The **Petition Fee of \$130.00** set forth in 37 C.F.R. § 1.17(i) is enclosed herewith.

METHOD OF PAYMENT OF FEES

- ☐ Attached is a check in the amount of \$240.00.  
☐ Charge Deposit Account No. 13-2490 in the amount of \$ . (A duplicate copy of this communication is enclosed for that purpose.)

Please charge any underpayment or credit any overpayment in connection with this communication to Deposit Account No. 13-2490. A duplicate copy of this communication is enclosed for this purpose.

**CERTIFICATE OF MAILING AS "EXPRESS MAIL" (37 CFR 1.10)** I hereby certify that this correspondence and all attached paper(s) or fee(s) is being deposited with sufficient postage, with the United States Postal Service as EXPRESS MAIL POST OFFICE TO ADDRESSEE in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, with sufficient postage, on this 13<sup>th</sup> Day of July, **2004**, under Express Mail Certificate No. **EV334706100US**.

Date: 7/13/04

Respectfully submitted,

  
David S. Harper  
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312-913-0001

### **U.S. Patent Documents**

1. Juan Saus, U.S. Patent No. 6,579,969, Issued on June 17, 2003.
2. Andrew Fire, et al., U.S. Patent No. 6,506,559, Issued on January 14, 2003.

### **Foreign Documents**

3. Juan Saus, et al., International Published PCT Application No. WO 00/50607, Published on August 31, 2000.
4. Rosen, et al., International Published PCT Application No. WO 01/54733, Published on August 2, 2001.
5. Juan Saus, International Published PCT Application No. WO 02/061430, Published on August 8, 2002.
6. Juan Saus, et al., International Published PCT Application No. WO 03/048193, Published on June 12, 2003.
7. Isogai, T., et al., European Patent Application No. EP 1 347 046, Published on September 24, 2003.

### **Other Documents**

8. Tatusova, et al., (1999), FEMS Microbiol Lett., "BLAST 2 sequences, a new tool form comparing protein and nucleotide sequences", Vol: 174, pp. 247-250.
9. Jones, et al., (1986), Nature, "Replacing the complementarity-determining regions in a human antibody with those from a mouse", Vol: 321, pp. 522-525.
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13. Padlan, (1991), *Molec. Immun.*, "A possible procedure for reducing the immunogenicity of antibody variable domains while preserving their ligand-binding properties", Vol: 28, pp. 489-498.
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16. Pham, C.T., & T.J. Ley, (1999), *Proc. Natl Acad Sci USA*, "Dipeptidyl peptidase I is required for the processing and activation of granzymes A and B in vivo", Vol: 96(15), pp. 8627-8632.
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19. Turk, V., et al., (2001), *EMBO J*, "Lysosomal cysteine proteases: facts and opportunities", Vol: 20(17), pp. 4629-4633.
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25. Supattapone, S., et al., (2001), *J. Virol*, "Branched polyamines cure prion-infected neuroblastoma cells", Vol: 75, pp. 3453-3461.

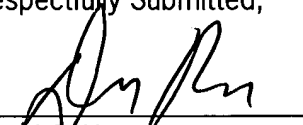
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